ZoneFlex™ 2741

Smart Wi-Fi 802.11g Outdoor Access Point

The First Outdoor AP with an Integrated Smart Antenna Array and Smart Wi-Fi Meshing

The Ruckus ZoneFlex 2741 is the first centrally-managed 802.11g Smart Wi-Fi access point (AP) with advanced capabilities, such as an integrated high-gain directional antenna array and smart wireless meshing, not found in any other outdoor wireless AP.

Designed for harsh outdoor conditions, the Ruckus ZoneFlex 2741 is perfect for service providers looking to easily extend branded broadband services, offload data traffic from congested 3G networks, deploy multimedia hotspots or offer wireless broadband services where fixed line access is limited.

The ZoneFlex 2741 is also ideal for hotels, schools, warehouses and other enterprises needing to extend managed wireless LANs (WLANs) outdoors where Ethernet cabling is not possible.

The ZoneFlex 2741 is capable of sustaining performance of up to 20 Mbps over 100 meters and up to 10 Mbps over 300 meters or more. The ZoneFlex 2741 can be deployed and managed as a standalone AP, as part of a distributed Wi-Fi network using the Ruckus FlexMaster™ system or as part of a managed WLAN using the Ruckus ZoneDirector Smart WLAN controller.

Each ZoneFlex 2741 integrates Ruckus-patented BeamFlex™ smart antenna technology that automatically adapts Wi-Fi signals to changing environmental conditions – enabling unprecedented multimedia support, ensuring stable user connectivity and delivering consistent performance at longer ranges.

Flexible deployment options using sophisticated tunneling and traffic redirection techniques, allow support for a number of hotspot business models. Advanced remote management includes support for Ruckus FlexMaster (using TR-069) remote WLAN management system as well as the ZoneDirector™ WLAN controller (using SNMP).

The ZoneFlex 2741 can be configured in minutes through a Web-based wizard on the Ruckus ZoneDirector controller. The Ruckus ZoneFlex 2741 simply plugs into any Ethernet network and automatically discovers the ZoneDirector. No RF tuning. No client configuration. A true plug-and-play multimedia WLAN that is ready to use, stable and high performance.

BENEFITS

Breakthrough user performance, range and density

Advanced smart antenna array and Quality of Service (QoS) technology delivers 20 concurrent voice calls, 100 simultaneous data users or 20 Mbps of guaranteed user throughput for over 100 meters (line of sight).

Flexible deployment options enable myriad business models

L2TP tunneling and WISPr (future) traffic redirection capabilities enablesupport for a variety of architectures and business models while SNMP and TR-069 support provide robust remote management.

Smart antenna array extends coverage, improves reliability

Directional, high-gain antennas dynamically combine to give hotspot operators and enterprises two- to four-times the coverage over typical consumer and enterprise APs.

Hardened enclosure for harsh outdoor environments

IP-65 water and dust proof plastic enclosure with flexible mounting options ensures that no distortion of Wi-Fi signals is introduced.

No RF expertise required

Smart antenna array eliminates AP placement issues and minimizes adjacent AP interference, while ZoneDirector controls dynamic channel assignment and power management.

Proven video streaming support

The Ruckus smart antenna system and video QoS already proven for real-time IP video streaming applications deployed by over 100 IPTV operators worldwide.

"IT lite" configuration and management

Web-based wizard enables configuration of multiple APs across the entire WLAN in minutes. Once configured, the WLAN manages itself.

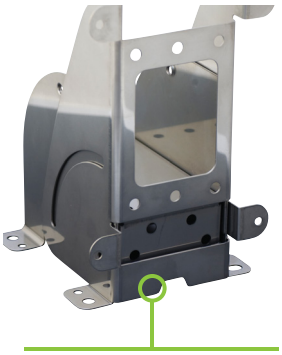
Enables business class multimedia hotspots

New revenue opportunities for operators such as (VoFi) services, extended enterprise access, IP video applications and tiered service classes.

Ruckus™ WIRELESS

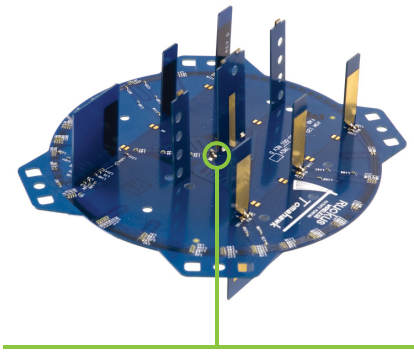
ZoneFlex 2741

802.11g Smart Wi-Fi Outdoor Access Point



Flexible mounting options, including pole, ceiling or wall mounting.

With a sleek, purpose-built IP-65 enclosure, the ZoneFlex 2741 can be deployed in harsh environmental conditions ranging from -20°C - 65°C (-4°F - 149°F)



A patented smart antenna array integrates six high-gain vertically and horizontally-polarized antenna elements. This enables up to 4096 potential antenna combinations and up to 10 dB gain, delivering unprecedented range extension, signal reliability and higher data rates.

Ultra high performance and cost effective

Unlike any other outdoor AP available today, each Ruckus ZoneFlex 2741 integrates a state-of-the-art intelligent antenna array that extends signal coverage and adapts to changes in the RF environment. Sophisticated expert control software constantly steers Wi-Fi signals over the best performing paths while rejecting interference – all in real time. This high-gain smart antenna array supports up to 100 simultaneous data users or 20 concurrent voice calls, and capable of sustaining 20 Mbps of performance over 100 meters (LOS) and up to 10 Mbps of sustained throughput up to 300 meters. Superior signal coverage reduces the number of APs required for any given area.

Flexible deployment options and robust management

The ZoneFlex 2741 is ideally suited to help providers deliver consistent access policies and user experience across all locations using advanced tunneling or traffic redirection techniques. The ZoneFlex 2741 can be deployed and managed individually as a standalone AP using SNMP or remotely as part of a network of APs, leveraging using the TR-069 protocol supported by the Ruckus FlexMaster Smart Wi-Fi management platform. The ZoneFlex 2741 can also be deployed as part of a managed wireless LAN system using the ZoneDirector Smart WLAN controller.

Simple configuration

Ruckus ZoneFlex 2741 APs are automatically configured by the Ruckus ZoneDirector. A network of APs can be centrally configured quickly and simply through the ZoneDirector's Web-based wizard. And with the self-optimizing Ruckus BeamFlex technology, the ZoneFlex 2741 can be installed without extensive site surveys and RF planning.

Smart meshing increases flexibility, reduces costs

The ZoneFlex 2741 uniquely supports Ruckus Smart Mesh Networking technology. This enables providers and enterprises to easily extend Wi-Fi services to locations where cabling Ethernet is cost prohibitive or impossible. Smart Mesh Networking is self-organizing and self-healing allowing administrators to plug ZoneFlex 2741 APs into PoE injectors, then walk away. All configuration and management is delivered through the ZoneDirector Smart WLAN platform. Patented Ruckus Smart Wi-Fi technology provides extended range and dynamic signal controls between mesh nodes, minimizing inter-nodal hops that degrade performance. Dynamic RF routing between mesh nodes adapts ensures high reliability when the environment changes.

Business-class, smart multimedia hotspots

The ZoneFlex 2741 lets operators build a new class of multimedia hotspots. Equipped with a dual-polarized directional antenna system, the ZoneFlex 2741 delivers stable connectivity to any Wi-Fi-enabled handheld device and flicker-free support for concurrent video streams and voice over Wi-Fi calls.

Differentiated services with multiple SSIDs

Up to eight discrete SSIDs can be configured within each Ruckus ZoneFlex 2741, each with unique broadcast, QoS, security and management parameters assigned. This enables hot-zone operators to easily offer tiered services to different user or traffic types. Enterprises can use this features to differentiate guest, contractor and employee access policies or to segment traffic types.

Dynamic RF management

An integrated smart antenna system (BeamFlex) automatically coordinates local RF management – automatically steering Wi-Fi signals toward each receiver and away from noise. Unlike omni antennas, BeamFlex does not constantly radiate in all directions thereby minimizing adjacent AP interference. The Ruckus ZoneDirector also dynamically exerts control over RF channel assignments and transmit power levels to further optimize the RF environment without manual intervention.

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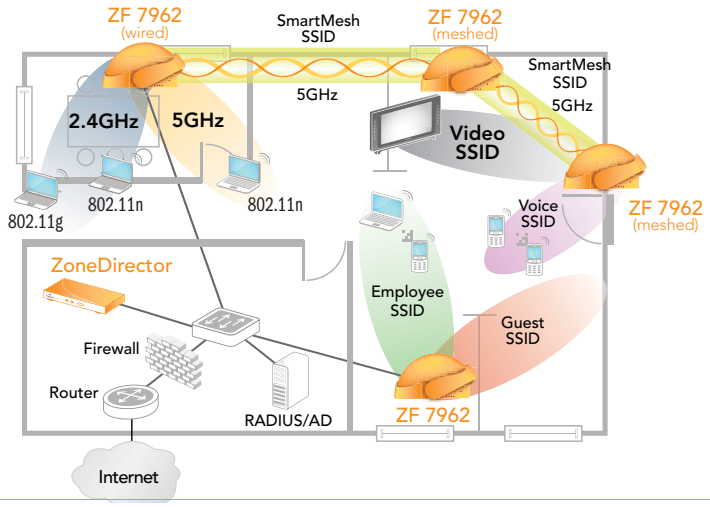
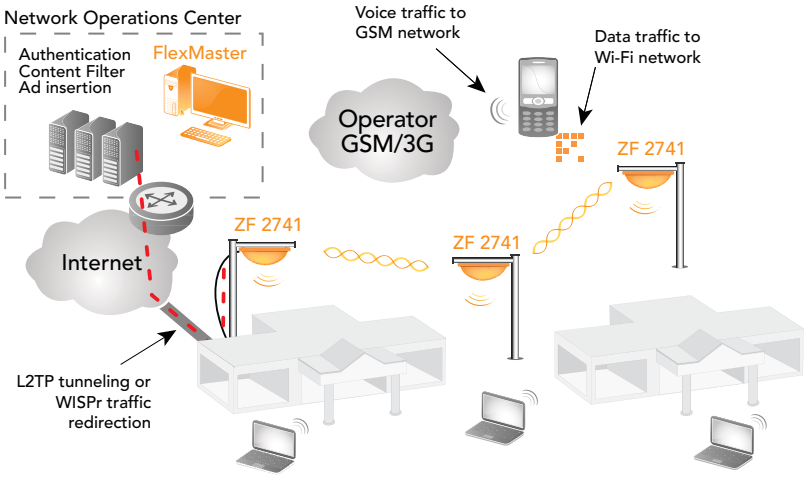
ENTERPRISE WLAN EXTENSION

ZoneFlex 2741 Smart Wi-Fi access points can be deployed as a seamless extension (meshed or wired) to a managed wireless LAN working in concert with indoor ZoneFlex 2942 APs and controlled by the Ruckus ZoneDirector Smart WLAN controller.



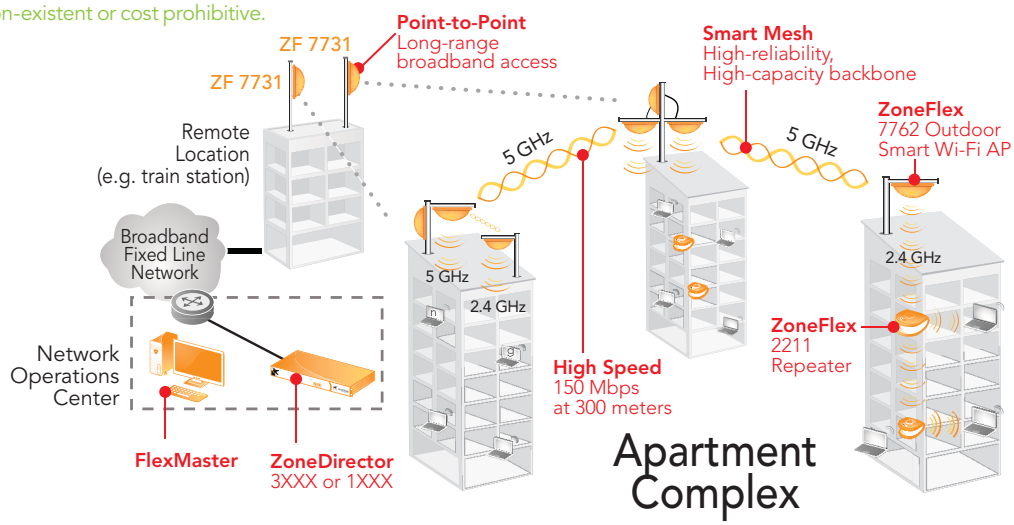
SMARTER MULTIMEDIA HOTSPOTS (SMARTSPOTS)

Perfect for offloading data traffic from 3G networks, the ZoneFlex 2741 also supports L2TP tunneling and WISPr traffic redirection (future) providing the cost-effective extension of carrier-branded broadband services and creating more robust multimedia hotspots.



WIRELESS BROADBAND ACCESS

A long-range, adaptive smart antenna system within each ZoneFlex 2741 allows providers to reliably deliver new wireless DSL services in areas where fixed line access is non-existent or cost prohibitive.



Specifications

PHYSICAL CHARACTERISTICS

POWER	• Power over Ethernet Class 0 • 12V DC
PHYSICAL SIZE	• 27.1 cm (L), 17.2 cm (W), 13.1 cm (H)
WEIGHT	• 877g (1.93 lbs.) (no external mounting hardware)
ANTENNA	• Internal software-configurable antenna array with directional and omni high-gain elements that provide up to 4,000 unique antenna patterns • One external N-Type antenna port
ETHERNET PORTS	• 1 port, auto MDX, auto-sensing 10/100Mbps, RJ-45 • Power over Ethernet (802.3af)
MOUNTING OPTIONS	• Flexible mounting kit for pole, ceiling or wall included
PoE INJECTOR	• Included
ENVIRONMENTAL CONDITIONS	• IP-65 rated • Operating air temperature: -20°C - 65°C (-4°F - 149°F)
POWER DRAW	• 10W (PoE) • 10W (12V DC)

PERFORMANCE AND SUPPORTED CONFIGURATIONS

CONCURRENT STATIONS	• Up to 100
TARGET UDP THROUGHPUT	• 15-20 Mbps (54 Mbps bursts) sustainable throughput for over 100 meters (line of sight)
SIMULTANEOUS Vo-Fi CLIENTS	• Up to 20

TRAFFIC MANAGEMENT AND QUALITY OF SERVICE

CLASSES OF SERVICE	• Voice, video, best effort and background
SOFTWARE QUEUES	• Four per station
802.11e	• Supported
AUTOMATIC TRAFFIC CLASSIFICATION	• Automatic type of service tagging for multicast video packets
RATE LIMITING	• Supported
VLAN SUPPORT	• 802.1Q
HEURISTIC CLASSIFICATION	• Supported
TUNNELING/ REDIRECTION	• L2TP support • WISPr traffic redirection (future)

DEPLOYMENT

OPTIONS	• Managed by ZoneDirector • Individually managed • Managed by FlexMaster

MANAGEMENT

CONFIGURATION	• Web user interface, CLI (Telnet), SSH HTTP/S, SNMP statistics interface. TR-069 through FlexMaster
STATISTICS	• LAN, wireless and associated stations (accessible via Web UI)
AUTO AP SOFTWARE UPDATES	• FTP or TFTP, remote auto available

WI-FI

STANDARDS	• 802.11b/g
SUPPORTED DATA RATES	• 54,48,36,24,18,12,11,9,6,5.5,2,1 Mbps
CHANNELS	• US/Canada: 1-11 • Europe (ETSI X30): 1-13 • Japan X41: 1-13
AUTO CHANNEL SELECTION	• Supported
RF POWER OUTPUT	• 27 dBm for wireless-B • 27 dBm for wireless-G • Country-specific power settings are configurable
TRANSMIT POWER CONTROL	• Supported
BSSID	• Up to eight
POWER SAVE	• Supported
WIRELESS SECURITY	• WEP, WPA-PSK, WPA-TKIP, WPA2 AES, 802.11i • Authentication via 802.1X with the ZoneDirector, local authentication database, support for RADIUS and ActiveDirectory
CERTIFICATIONS	• U.S., Europe, Canada, Australia, New Zealand, China, Hong Kong, India, Japan • WEEE/RoHS compliance

Product Ordering Information

Model	Description
ZoneFlex 2741 802.11g Outdoor Access Point	
901-2741-XX01	Centrally managed 802.11g Outdoor Access Point

PLEASE NOTE: When ordering you must specify the destination region by indicating -US, -EU, -UK, -UN, -AU, -CH, -JP or -IN instead of XX.

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Ruckus WIRELESS

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